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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,150	10/22/2003	Huan-sheng Hwang	9314-49	6598
7590	01/11/2006		EXAMINER A, MINH D	
Robert M. Meeks Myers Bigel Sibley & Sajovec Post Office Box 37428 Raleigh, NC 27627			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/691,150	Applicant(s) HWANG ET AL.	
	Examiner Minh D. A	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,19-21 and 39-42 is/are rejected.
- 7) ☒ Claim(s) 3-18, 22-38 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/2/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's communication filed on 10/27/05 has been carefully considered by the examiner. The arguments advanced therein are persuasive with respect to the restriction and rejection of record, and those restrictions are accordingly withdrawn. In view of a further search, however, a new rejection is set forth below. This action is not made final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 19-21 and 39-42 are rejected under 35 U.S.C. 102(e) as being unpatentable by Hendler et al (US 2004/0125020).

Regarding claim 1, Hendler discloses an antenna comprising a ground plane (18); a conductor loop (24 and 30) overlying the ground plane (18); and a monopole (14 and 16) extending off the ground plane (18), wherein the monopole (14 and 16) and the conductor loop (24 and 30) are configured to be coupled to a common feed-point. See figures 1-8, col.3, lines [0033] -[0037] to col.5, lines [0048]-[0057].

Regarding claim 2, Hendler discloses the conductor loop has a reflective feature therein. See figure 1.

Regarding claim 19, Hendler discloses a wideband printed monopole antenna having a helical element wrapped around the monopole and couple to the common feedpoint. See col.2, lines [0017] –[0019].

Regarding claim 20, Hendler discloses an antenna comprising: a frame; a radio communications circuit supported by the frame; a conductive ground plane disposed on a substrate supported by the frame; a conductor loop supported by the frame and overlying the ground plane; and a monopole supported by the frame and extending off the ground plane, wherein the monopole and the conductor loop are configured to be commonly coupled to the radio communications circuit at a common feedpoint. See figures 1-8, col.3, lines [0033] –[0037] to col.5, lines [0048]–[0057].

Regarding claim 21, Hendler discloses the conductor loop has a reflective feature therein. See figure 1.

Regarding claims 39-42, Hendler discloses an antenna comprising: a frame; a radio communications circuit supported by the frame; an antenna electrically coupled to the radio communications circuit, attached to the frame and comprising commonly fed conductor loop, monopole and helical elements and conductor loop element comprises a rectangular conductor loop. See figures 1-8, col.3, lines [0033] – [0037] to col.5, lines [0048]–[0057].

Allowable Subject Matter

4. Claims 3-18, 22-38 and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2821

The following is a statement of reasons for the indication of allowable subject matter:

Prior art does not teach that, wherein the reflective feature comprises a corner recited in dependent claim 3 and 22.

Prior art does not teach that, wherein the ground plane, the conductor loop element, the monopole element and the helical element are configured to provide a voltage standing wave ratio (VSWR) less than about 3 over a frequency range from about 1.5 GHz to about 2.5 GHz and a VSWR less than 3 over a frequency range from about 800 MHz to about 900 MHz recited in dependent claim 43.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Woo (US 6,317,086) and Bowers et al (US 5,914,692) are cited to show a multiple loop antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Art Unit: 2821


Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Examiner

Minh A

Art unit 2821

1/8/06



WILSON LEE
PRIMARY EXAMINER